ABSTRACT

[000122] The present invention provides methods for determining which cancer patients are susceptible to arginine depletion therapy and methods for treating cancer. The present invention also provides methods for predicting the appropriateness of arginine deprivation therapy for a cancer patient. The methods generally comprise obtaining a tumor sample from the cancer patient and detecting the presence or absence of evidence of urea cycle enzyme expression in the tumor sample. The absence of evidence of urea cycle enzyme expression in the tumor sample is indicative of a cancer patient who is a candidate for arginine deprivation therapy, and the presence of evidence of urea cycle enzyme expression in said tumor sample is indicative of a cancer patient who is not a candidate for arginine deprivation therapy. Prior to, simultaneous with, or after testing the tumor sample, the method further comprises the steps of obtaining a non-cancerous sample from the cancer patient and detecting the presence or absence of evidence of urea cycle enzyme expression in the non-cancerous sample, wherein the absence of evidence of urea cycle enzyme expression in the non-cancerous sample and absence of evidence of urea cycle enzyme expression in the tumor sample is indicative of a cancer patient who is not a good candidate for arginine deprivation therapy, the presence of evidence of urea cycle enzyme expression in the non-cancerous sample and the absence of evidence of urea cycle enzyme expression in the tumor sample is indicative of a cancer patient who is a good candidate for arginine deprivation therapy, and the presence of evidence of urea cycle enzyme expression in the tumor sample is indicative of a cancer patient who is not a candidate for arginine deprivation therapy.